

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Canton

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North Canton, OH 44720

Tel: (330)497-9396

TestAmerica Job ID: 240-32208-1

Client Project/Site: NBM - TANE131206-1OSI

For:

Ohio EPA CO

4675 Homer Ohio Lane

Groveport, Ohio 43123

Attn: Mr. Scott Shane

Denise Pohl

Authorized for release by:

12/26/2013 11:55:10 AM

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Results relate only to the items tested and the sample(s) as received by the laboratory.

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Definitions/Glossary

Client: Ohio EPA CO
Project/Site: NBM - TANE131206-1OSI

TestAmerica Job ID: 240-32208-1

Qualifiers

Metals

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.
F	MS/MSD Recovery and/or RPD exceeds the control limits

General Chemistry

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Case Narrative

Client: Ohio EPA CO
Project/Site: NBM - TANE131206-1OSI

TestAmerica Job ID: 240-32208-1

Job ID: 240-32208-1

Laboratory: TestAmerica Canton

Narrative

CASE NARRATIVE

Client: Ohio EPA CO

Project: NBM - TANE131206-1OSI

Report Number: 240-32208-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

TestAmerica Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

All solid sample results are reported on an "as received" basis unless otherwise indicated by the presence of a % solids value in the method header.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

RECEIPT

The samples were received on 12/06/2013; the samples arrived in good condition, properly preserved and on ice. The temperature of the cooler at receipt was 1.4 C.

TCLP METALS (ICP)

Samples NBM 01 (240-32208-1), NBM 02 (240-32208-2), NBM 03 (240-32208-3), NBM 04 (240-32208-4), NBM 05 (240-32208-5), NBM 06 (240-32208-6) and NBM 07 (240-32208-7) were analyzed for TCLP metals (ICP) in accordance with EPA SW-846 Methods 1311/6010B. The samples were leached on 12/18/2013, prepared on 12/19/2013 and analyzed on 12/21/2013 and 12/23/2013.

Arsenic, Barium, Lead and Selenium were detected in method blank LB 240-114293/1-D at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

Barium was detected in method blank MB 240-114388/2-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

Barium failed the recovery criteria low for the MSD of sample NBM 03MSD (240-32208-3) in batch 240-114760. Barium exceeded the RPD

Case Narrative

Client: Ohio EPA CO
Project/Site: NBM - TANE131206-1OSI

TestAmerica Job ID: 240-32208-1

Job ID: 240-32208-1 (Continued)

Laboratory: TestAmerica Canton (Continued)

limit.

Refer to the QC report for details.

Samples NBM 01 (240-32208-1)[10X], NBM 01 (240-32208-1)[20X], NBM 02 (240-32208-2)[10X], NBM 05 (240-32208-5)[10X], NBM 05 (240-32208-5)[50X], NBM 07 (240-32208-7)[10X] and NBM 07 (240-32208-7)[100X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

Method(s) 3010A: A 4x dilution was done due to matrix. NBM 05 (240-32208-5)

Method(s) 6010B: The following sample(s) was diluted due to the nature of the sample matrix: NBM 01 (240-32208-1), NBM 02 (240-32208-2), NBM 05 (240-32208-5), NBM 07 (240-32208-7). Elevated reporting limits (RLs) are provided.

Method(s) 6010B: The following sample(s) was diluted due to the nature of the sample matrix: NBM 01 (240-32208-1), NBM 05 (240-32208-5). Elevated reporting limits (RLs) are provided.

No other difficulties were encountered during the metals analysis.

All other quality control parameters were within the acceptance limits.

TCLP MERCURY

Samples NBM 01 (240-32208-1), NBM 02 (240-32208-2), NBM 03 (240-32208-3), NBM 04 (240-32208-4), NBM 05 (240-32208-5), NBM 06 (240-32208-6) and NBM 07 (240-32208-7) were analyzed for TCLP mercury in accordance with EPA SW-846 Methods 1311/7470A. The samples were leached on 12/18/2013, prepared on 12/19/2013 and analyzed on 12/20/2013.

Method(s) 7470A: A 100x dilution was done due to limited volume. NBM 01 (240-32208-1)

Method(s) 7470A: A 100x dilution was done due to matrix. NBM 05 (240-32208-5)

No other difficulties were encountered during the mercury analysis.

All other quality control parameters were within the acceptance limits.

PH

Samples NBM 01 (240-32208-1), NBM 02 (240-32208-2), NBM 05 (240-32208-5) and NBM 07 (240-32208-7) were analyzed for pH in accordance with EPA SW-846 Method 9045C. The samples were analyzed on 12/06/2013.

No difficulties were encountered during the pH analysis.

All quality control parameters were within the acceptance limits.

Method Summary

Client: Ohio EPA CO
Project/Site: NBM - TANE131206-1OSI

TestAmerica Job ID: 240-32208-1

Method	Method Description	Protocol	Laboratory
6010B	Metals (ICP) - Solid Matrix	SW846	TAL CAN
7470A	Mercury (CVAA) - Solid Matrix	SW846	TAL CAN
9045C	pH	SW846	TAL CAN

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396



Sample Summary

Client: Ohio EPA CO
Project/Site: NBM - TANE131206-1OSI

TestAmerica Job ID: 240-32208-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-32208-1	NBM 01	Waste	12/05/13 16:00	12/06/13 14:35
240-32208-2	NBM 02	Waste	12/05/13 16:02	12/06/13 14:35
240-32208-3	NBM 03	Waste	12/05/13 16:05	12/06/13 14:35
240-32208-4	NBM 04	Waste	12/05/13 16:08	12/06/13 14:35
240-32208-5	NBM 05	Waste	12/05/13 16:15	12/06/13 14:35
240-32208-6	NBM 06	Waste	12/06/13 12:15	12/06/13 14:35
240-32208-7	NBM 07	Waste	12/06/13 13:00	12/06/13 14:35



Detection Summary

Client: Ohio EPA CO
Project/Site: NBM - TANE131206-1OSI

TestAmerica Job ID: 240-32208-1

Client Sample ID: NBM 01

Lab Sample ID: 240-32208-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.55	J B	1.0	0.064	mg/L	20		6010B	TCLP
Barium	0.70	J B	10	0.00067	mg/L	1		6010B	TCLP
Cadmium	0.070	J	0.10	0.00066	mg/L	1		6010B	TCLP
Chromium	16		0.50	0.0022	mg/L	1		6010B	TCLP
Lead	0.70	J B	10	0.038	mg/L	20		6010B	TCLP
Selenium	0.052	J B	1.0	0.041	mg/L	10		6010B	TCLP
pH	1.94		0.100	0.100	SU	1		9045C	Total/NA

Client Sample ID: NBM 02

Lab Sample ID: 240-32208-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.23	J B	0.50	0.032	mg/L	10		6010B	TCLP
Barium	0.80	J B	10	0.00067	mg/L	1		6010B	TCLP
Cadmium	0.21		0.10	0.00066	mg/L	1		6010B	TCLP
Chromium	15		0.50	0.0022	mg/L	1		6010B	TCLP
Lead	0.62	J B	5.0	0.019	mg/L	10		6010B	TCLP
pH	1.64		0.100	0.100	SU	1		9045C	Total/NA

Client Sample ID: NBM 03

Lab Sample ID: 240-32208-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0063	J B	0.50	0.0032	mg/L	1		6010B	TCLP
Barium	0.044	J B	10	0.00067	mg/L	1		6010B	TCLP
Cadmium	0.0010	J	0.10	0.00066	mg/L	1		6010B	TCLP
Chromium	0.11	J	0.50	0.0022	mg/L	1		6010B	TCLP
Lead	0.030	J B	0.50	0.0019	mg/L	1		6010B	TCLP
Selenium	0.012	J B	0.25	0.0041	mg/L	1		6010B	TCLP

Client Sample ID: NBM 04

Lab Sample ID: 240-32208-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0078	J B	0.050	0.0032	mg/L	1		6010B	TCLP
Barium	0.083	J B	10	0.00067	mg/L	1		6010B	TCLP
Chromium	0.14	J	0.50	0.0022	mg/L	1		6010B	TCLP
Lead	0.012	J B	0.50	0.0019	mg/L	1		6010B	TCLP
Selenium	0.010	J B	0.10	0.0041	mg/L	1		6010B	TCLP

Client Sample ID: NBM 05

Lab Sample ID: 240-32208-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.11	J B	400	0.027	mg/L	10		6010B	TCLP
Cadmium	0.70	J	4.0	0.026	mg/L	10		6010B	TCLP
Chromium	280		20	0.088	mg/L	10		6010B	TCLP
Lead	3.4	J B	100	0.38	mg/L	50		6010B	TCLP

Client Sample ID: NBM 06

Lab Sample ID: 240-32208-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0064	J B	0.050	0.0032	mg/L	1		6010B	TCLP
Barium	0.087	J B	10	0.00067	mg/L	1		6010B	TCLP

This Detection Summary does not include radiochemical test results.

TestAmerica Canton

Detection Summary

Client: Ohio EPA CO
Project/Site: NBM - TANE131206-1OSI

TestAmerica Job ID: 240-32208-1

Client Sample ID: NBM 06 (Continued)

Lab Sample ID: 240-32208-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chromium	0.021	J	0.50	0.0022	mg/L	1		6010B	TCLP
Lead	0.034	J B	0.50	0.0019	mg/L	1		6010B	TCLP
Selenium	0.0071	J B	0.10	0.0041	mg/L	1		6010B	TCLP

Client Sample ID: NBM 07

Lab Sample ID: 240-32208-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	2.1	J B	5.0	0.32	mg/L	100		6010B	TCLP
Barium	0.12	J B	100	0.0067	mg/L	10		6010B	TCLP
Cadmium	0.10	J	1.0	0.0066	mg/L	10		6010B	TCLP
Chromium	69		5.0	0.022	mg/L	10		6010B	TCLP
Lead	2.6	J B	50	0.19	mg/L	100		6010B	TCLP
Silver	0.024	J	5.0	0.022	mg/L	10		6010B	TCLP
pH	1.22		0.100	0.100	SU	1		9045C	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Canton

Client Sample Results

Client: Ohio EPA CO
 Project/Site: NBM - TANE131206-1OSI

TestAmerica Job ID: 240-32208-1

Client Sample ID: NBM 01

Lab Sample ID: 240-32208-1

Date Collected: 12/05/13 16:00

Matrix: Waste

Date Received: 12/06/13 14:35

Method: 6010B - Metals (ICP) - Solid Matrix - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.55	J B	1.0	0.064	mg/L		12/19/13 09:51	12/23/13 11:57	20
Barium	0.70	J B	10	0.00067	mg/L		12/19/13 09:51	12/21/13 01:28	1
Cadmium	0.070	J	0.10	0.00066	mg/L		12/19/13 09:51	12/21/13 01:28	1
Chromium	16		0.50	0.0022	mg/L		12/19/13 09:51	12/21/13 01:28	1
Lead	0.70	J B	10	0.038	mg/L		12/19/13 09:51	12/23/13 11:57	20
Selenium	0.052	J B	1.0	0.041	mg/L		12/19/13 09:51	12/21/13 01:37	10
Silver	0.50	U	0.50	0.0022	mg/L		12/19/13 09:51	12/21/13 01:28	1

Method: 7470A - Mercury (CVAA) - Solid Matrix - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.012	mg/L		12/19/13 14:00	12/20/13 09:34	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	1.94		0.100	0.100	SU			12/06/13 17:16	1

Client Sample Results

Client: Ohio EPA CO
 Project/Site: NBM - TANE131206-1OSI

TestAmerica Job ID: 240-32208-1

Client Sample ID: NBM 02

Lab Sample ID: 240-32208-2

Date Collected: 12/05/13 16:02

Matrix: Waste

Date Received: 12/06/13 14:35

Method: 6010B - Metals (ICP) - Solid Matrix - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.23	J B	0.50	0.032	mg/L		12/19/13 09:51	12/21/13 02:02	10
Barium	0.80	J B	10	0.00067	mg/L		12/19/13 09:51	12/21/13 01:45	1
Cadmium	0.21		0.10	0.00066	mg/L		12/19/13 09:51	12/21/13 01:45	1
Chromium	15		0.50	0.0022	mg/L		12/19/13 09:51	12/21/13 01:45	1
Lead	0.62	J B	5.0	0.019	mg/L		12/19/13 09:51	12/21/13 02:02	10
Selenium	1.0	U	1.0	0.041	mg/L		12/19/13 09:51	12/21/13 02:02	10
Silver	0.50	U	0.50	0.0022	mg/L		12/19/13 09:51	12/21/13 01:45	1

Method: 7470A - Mercury (CVAA) - Solid Matrix - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.0020	U	0.0020	0.00012	mg/L		12/19/13 14:00	12/20/13 09:35	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	1.64		0.100	0.100	SU			12/06/13 17:16	1

Client Sample Results

Client: Ohio EPA CO
 Project/Site: NBM - TANE131206-1OSI

TestAmerica Job ID: 240-32208-1

Client Sample ID: NBM 03

Lab Sample ID: 240-32208-3

Date Collected: 12/05/13 16:05

Matrix: Waste

Date Received: 12/06/13 14:35

Method: 6010B - Metals (ICP) - Solid Matrix - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0063	J B	0.50	0.0032	mg/L		12/19/13 09:51	12/21/13 00:55	1
Barium	0.044	J B	10	0.00067	mg/L		12/19/13 09:51	12/21/13 00:55	1
Cadmium	0.0010	J	0.10	0.00066	mg/L		12/19/13 09:51	12/21/13 00:55	1
Chromium	0.11	J	0.50	0.0022	mg/L		12/19/13 09:51	12/21/13 00:55	1
Lead	0.030	J B	0.50	0.0019	mg/L		12/19/13 09:51	12/21/13 00:55	1
Selenium	0.012	J B	0.25	0.0041	mg/L		12/19/13 09:51	12/21/13 00:55	1
Silver	0.50	U	0.50	0.0022	mg/L		12/19/13 09:51	12/21/13 00:55	1

Method: 7470A - Mercury (CVAA) - Solid Matrix - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.0020	U	0.0020	0.00012	mg/L		12/19/13 14:00	12/20/13 09:26	1



Client Sample Results

Client: Ohio EPA CO
 Project/Site: NBM - TANE131206-1OSI

TestAmerica Job ID: 240-32208-1

Client Sample ID: NBM 04

Lab Sample ID: 240-32208-4

Date Collected: 12/05/13 16:08

Matrix: Waste

Date Received: 12/06/13 14:35

Method: 6010B - Metals (ICP) - Solid Matrix - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0078	J B	0.050	0.0032	mg/L		12/19/13 09:51	12/21/13 02:11	1
Barium	0.083	J B	10	0.00067	mg/L		12/19/13 09:51	12/21/13 02:11	1
Cadmium	0.10	U	0.10	0.00066	mg/L		12/19/13 09:51	12/21/13 02:11	1
Chromium	0.14	J	0.50	0.0022	mg/L		12/19/13 09:51	12/21/13 02:11	1
Lead	0.012	J B	0.50	0.0019	mg/L		12/19/13 09:51	12/21/13 02:11	1
Selenium	0.010	J B	0.10	0.0041	mg/L		12/19/13 09:51	12/21/13 02:11	1
Silver	0.50	U	0.50	0.0022	mg/L		12/19/13 09:51	12/21/13 02:11	1

Method: 7470A - Mercury (CVAA) - Solid Matrix - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.0020	U	0.0020	0.00012	mg/L		12/19/13 14:00	12/20/13 09:41	1



Client Sample Results

Client: Ohio EPA CO
 Project/Site: NBM - TANE131206-1OSI

TestAmerica Job ID: 240-32208-1

Client Sample ID: NBM 05

Lab Sample ID: 240-32208-5

Date Collected: 12/05/13 16:15

Matrix: Waste

Date Received: 12/06/13 14:35

Method: 6010B - Metals (ICP) - Solid Matrix - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	10	U	10	0.64	mg/L		12/19/13 09:51	12/23/13 12:01	50
Barium	0.11	J B	400	0.027	mg/L		12/19/13 09:51	12/21/13 02:19	10
Cadmium	0.70	J	4.0	0.026	mg/L		12/19/13 09:51	12/21/13 02:19	10
Chromium	280		20	0.088	mg/L		12/19/13 09:51	12/21/13 02:19	10
Lead	3.4	J B	100	0.38	mg/L		12/19/13 09:51	12/23/13 12:01	50
Selenium	4.0	U	4.0	0.16	mg/L		12/19/13 09:51	12/21/13 02:19	10
Silver	20	U	20	0.088	mg/L		12/19/13 09:51	12/21/13 02:19	10

Method: 7470A - Mercury (CVAA) - Solid Matrix - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.012	mg/L		12/19/13 14:00	12/20/13 09:43	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	0.100	U	0.100	0.100	SU			12/06/13 17:16	1

Client Sample Results

Client: Ohio EPA CO
 Project/Site: NBM - TANE131206-1OSI

TestAmerica Job ID: 240-32208-1

Client Sample ID: NBM 06

Lab Sample ID: 240-32208-6

Date Collected: 12/06/13 12:15

Matrix: Waste

Date Received: 12/06/13 14:35

Method: 6010B - Metals (ICP) - Solid Matrix - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0064	J B	0.050	0.0032	mg/L		12/19/13 09:51	12/21/13 02:27	1
Barium	0.087	J B	10	0.00067	mg/L		12/19/13 09:51	12/21/13 02:27	1
Cadmium	0.10	U	0.10	0.00066	mg/L		12/19/13 09:51	12/21/13 02:27	1
Chromium	0.021	J	0.50	0.0022	mg/L		12/19/13 09:51	12/21/13 02:27	1
Lead	0.034	J B	0.50	0.0019	mg/L		12/19/13 09:51	12/21/13 02:27	1
Selenium	0.0071	J B	0.10	0.0041	mg/L		12/19/13 09:51	12/21/13 02:27	1
Silver	0.50	U	0.50	0.0022	mg/L		12/19/13 09:51	12/21/13 02:27	1

Method: 7470A - Mercury (CVAA) - Solid Matrix - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.0020	U	0.0020	0.00012	mg/L		12/19/13 14:00	12/20/13 09:45	1



Client Sample Results

Client: Ohio EPA CO
 Project/Site: NBM - TANE131206-1OSI

TestAmerica Job ID: 240-32208-1

Client Sample ID: NBM 07

Lab Sample ID: 240-32208-7

Date Collected: 12/06/13 13:00

Matrix: Waste

Date Received: 12/06/13 14:35

Method: 6010B - Metals (ICP) - Solid Matrix - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	2.1	J B	5.0	0.32	mg/L		12/19/13 09:51	12/21/13 02:52	100
Barium	0.12	J B	100	0.0067	mg/L		12/19/13 09:51	12/21/13 02:35	10
Cadmium	0.10	J	1.0	0.0066	mg/L		12/19/13 09:51	12/21/13 02:35	10
Chromium	69		5.0	0.022	mg/L		12/19/13 09:51	12/21/13 02:35	10
Lead	2.6	J B	50	0.19	mg/L		12/19/13 09:51	12/21/13 02:52	100
Selenium	1.0	U	1.0	0.041	mg/L		12/19/13 09:51	12/21/13 02:35	10
Silver	0.024	J	5.0	0.022	mg/L		12/19/13 09:51	12/21/13 02:35	10

Method: 7470A - Mercury (CVAA) - Solid Matrix - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.0020	U	0.0020	0.00012	mg/L		12/19/13 14:00	12/20/13 09:47	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	1.22		0.100	0.100	SU			12/06/13 17:16	1



QC Sample Results

Client: Ohio EPA CO
Project/Site: NBM - TANE131206-1OSI

TestAmerica Job ID: 240-32208-1

Method: 6010B - Metals (ICP) - Solid Matrix

Lab Sample ID: MB 240-114388/2-A
Matrix: Waste
Analysis Batch: 114760

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 114388

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.50	U	0.50	0.0032	mg/L		12/19/13 09:51	12/21/13 00:47	1
Barium	0.00163	J	10	0.00067	mg/L		12/19/13 09:51	12/21/13 00:47	1
Cadmium	0.10	U	0.10	0.00066	mg/L		12/19/13 09:51	12/21/13 00:47	1
Chromium	0.50	U	0.50	0.0022	mg/L		12/19/13 09:51	12/21/13 00:47	1
Lead	0.50	U	0.50	0.0019	mg/L		12/19/13 09:51	12/21/13 00:47	1
Selenium	0.25	U	0.25	0.0041	mg/L		12/19/13 09:51	12/21/13 00:47	1
Silver	0.50	U	0.50	0.0022	mg/L		12/19/13 09:51	12/21/13 00:47	1

Lab Sample ID: LCS 240-114388/3-A
Matrix: Waste
Analysis Batch: 114760

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 114388

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	2.00	2.23		mg/L		111	50 - 150
Barium	2.00	2.03	J	mg/L		102	50 - 150
Cadmium	0.0500	0.0535	J	mg/L		107	50 - 150
Chromium	0.200	0.212	J	mg/L		106	50 - 150
Lead	0.500	0.482	J	mg/L		96	50 - 150
Selenium	2.00	2.26		mg/L		113	50 - 150
Silver	0.0500	0.0518	J	mg/L		104	50 - 150

Lab Sample ID: LB 240-114293/1-D
Matrix: Waste
Analysis Batch: 114760

Client Sample ID: Method Blank
Prep Type: TCLP
Prep Batch: 114388

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.00520	J	0.50	0.0032	mg/L		12/19/13 09:51	12/21/13 00:43	1
Barium	0.00454	J	10	0.00067	mg/L		12/19/13 09:51	12/21/13 00:43	1
Cadmium	0.10	U	0.10	0.00066	mg/L		12/19/13 09:51	12/21/13 00:43	1
Chromium	0.50	U	0.50	0.0022	mg/L		12/19/13 09:51	12/21/13 00:43	1
Lead	0.00685	J	0.50	0.0019	mg/L		12/19/13 09:51	12/21/13 00:43	1
Selenium	0.00717	J	0.25	0.0041	mg/L		12/19/13 09:51	12/21/13 00:43	1
Silver	0.50	U	0.50	0.0022	mg/L		12/19/13 09:51	12/21/13 00:43	1

Lab Sample ID: 240-32208-3 MS
Matrix: Waste
Analysis Batch: 114760

Client Sample ID: NBM 03
Prep Type: TCLP
Prep Batch: 114388

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.0063	J B	5.00	5.52		mg/L		110	50 - 150
Barium	0.044	J B	50.0	32.1	J	mg/L		64	50 - 150
Cadmium	0.0010	J	1.00	1.07		mg/L		107	50 - 150
Chromium	0.11	J	5.00	5.28		mg/L		103	50 - 150
Lead	0.030	J B	5.00	4.72		mg/L		94	50 - 150
Selenium	0.012	J B	1.00	1.08	J	mg/L		107	50 - 150
Silver	0.50	U	1.00	0.933	J	mg/L		93	50 - 150

TestAmerica Canton

QC Sample Results

Client: Ohio EPA CO
Project/Site: NBM - TANE131206-1OSI

TestAmerica Job ID: 240-32208-1

Method: 6010B - Metals (ICP) - Solid Matrix (Continued)

Lab Sample ID: 240-32208-3 MSD

Matrix: Waste

Analysis Batch: 114760

Client Sample ID: NBM 03

Prep Type: TCLP

Prep Batch: 114388

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	Limit
	Result	Qualifier		Result	Qualifier				Limits		
Arsenic	0.0063	J B	5.00	5.51		mg/L		110	50 - 150	0	20
Barium	0.044	J B	50.0	15.6	J F	mg/L		31	50 - 150	69	20
Cadmium	0.0010	J	1.00	1.07		mg/L		107	50 - 150	0	20
Chromium	0.11	J	5.00	5.26		mg/L		103	50 - 150	0	20
Lead	0.030	J B	5.00	4.83		mg/L		96	50 - 150	2	20
Selenium	0.012	J B	1.00	1.09	J	mg/L		108	50 - 150	1	20
Silver	0.50	U	1.00	0.973	J	mg/L		97	50 - 150	4	20

Method: 7470A - Mercury (CVAA) - Solid Matrix

Lab Sample ID: MB 240-114389/2-A

Matrix: Waste

Analysis Batch: 114787

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 114389

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Mercury	0.0020	U	0.0020	0.00012	mg/L		12/19/13 14:00	12/20/13 09:22	1

Lab Sample ID: LCS 240-114389/3-A

Matrix: Waste

Analysis Batch: 114787

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 114389

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec.
							Result
Mercury	0.00500	0.00498		mg/L		100	50 - 150

Lab Sample ID: LB 240-114293/1-E

Matrix: Waste

Analysis Batch: 114787

Client Sample ID: Method Blank

Prep Type: TCLP

Prep Batch: 114389

Analyte	LB	LB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Mercury	0.0020	U	0.0020	0.00012	mg/L		12/19/13 14:00	12/20/13 09:21	1

Lab Sample ID: 240-32208-3 MS

Matrix: Waste

Analysis Batch: 114787

Client Sample ID: NBM 03

Prep Type: TCLP

Prep Batch: 114389

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec.
	Result	Qualifier		Result	Qualifier				Limits
Mercury	0.0020	U	0.00500	0.00471		mg/L		94	50 - 150

Lab Sample ID: 240-32208-3 MSD

Matrix: Waste

Analysis Batch: 114787

Client Sample ID: NBM 03

Prep Type: TCLP

Prep Batch: 114389

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	Limit
	Result	Qualifier		Result	Qualifier				Limits		
Mercury	0.0020	U	0.00500	0.00486		mg/L		97	50 - 150	3	20

TestAmerica Canton

QC Sample Results

Client: Ohio EPA CO
 Project/Site: NBM - TANE131206-1OSI

TestAmerica Job ID: 240-32208-1

Method: 9045C - pH

Lab Sample ID: LCS 240-112608/12

Matrix: Waste

Analysis Batch: 112608

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Corrosivity	6.47	6.470		SU		100	97 - 103
pH	6.47	6.470		SU		100	97 - 103

Lab Sample ID: 240-32154-A-3 DU

Matrix: Waste

Analysis Batch: 112608

Client Sample ID: Duplicate

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
pH	7.11		8.640		SU		19	20

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13

QC Association Summary

Client: Ohio EPA CO
Project/Site: NBM - TANE131206-1OSI

TestAmerica Job ID: 240-32208-1

Metals

Leach Batch: 114293

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-32208-1	NBM 01	TCLP	Waste	1311	
240-32208-2	NBM 02	TCLP	Waste	1311	
240-32208-3	NBM 03	TCLP	Waste	1311	
240-32208-3 MS	NBM 03	TCLP	Waste	1311	
240-32208-3 MSD	NBM 03	TCLP	Waste	1311	
240-32208-4	NBM 04	TCLP	Waste	1311	
240-32208-5	NBM 05	TCLP	Waste	1311	
240-32208-6	NBM 06	TCLP	Waste	1311	
240-32208-7	NBM 07	TCLP	Waste	1311	
LB 240-114293/1-D	Method Blank	TCLP	Waste	1311	
LB 240-114293/1-E	Method Blank	TCLP	Waste	1311	

Prep Batch: 114388

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-32208-1	NBM 01	TCLP	Waste	3010A	114293
240-32208-2	NBM 02	TCLP	Waste	3010A	114293
240-32208-3	NBM 03	TCLP	Waste	3010A	114293
240-32208-3 MS	NBM 03	TCLP	Waste	3010A	114293
240-32208-3 MSD	NBM 03	TCLP	Waste	3010A	114293
240-32208-4	NBM 04	TCLP	Waste	3010A	114293
240-32208-5	NBM 05	TCLP	Waste	3010A	114293
240-32208-6	NBM 06	TCLP	Waste	3010A	114293
240-32208-7	NBM 07	TCLP	Waste	3010A	114293
LB 240-114293/1-D	Method Blank	TCLP	Waste	3010A	114293
LCS 240-114388/3-A	Lab Control Sample	Total/NA	Waste	3010A	
MB 240-114388/2-A	Method Blank	Total/NA	Waste	3010A	

Prep Batch: 114389

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-32208-1	NBM 01	TCLP	Waste	7470A	114293
240-32208-2	NBM 02	TCLP	Waste	7470A	114293
240-32208-3	NBM 03	TCLP	Waste	7470A	114293
240-32208-3 MS	NBM 03	TCLP	Waste	7470A	114293
240-32208-3 MSD	NBM 03	TCLP	Waste	7470A	114293
240-32208-4	NBM 04	TCLP	Waste	7470A	114293
240-32208-5	NBM 05	TCLP	Waste	7470A	114293
240-32208-6	NBM 06	TCLP	Waste	7470A	114293
240-32208-7	NBM 07	TCLP	Waste	7470A	114293
LB 240-114293/1-E	Method Blank	TCLP	Waste	7470A	114293
LCS 240-114389/3-A	Lab Control Sample	Total/NA	Waste	7470A	
MB 240-114389/2-A	Method Blank	Total/NA	Waste	7470A	

Analysis Batch: 114760

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-32208-1	NBM 01	TCLP	Waste	6010B	114388
240-32208-1	NBM 01	TCLP	Waste	6010B	114388
240-32208-2	NBM 02	TCLP	Waste	6010B	114388
240-32208-2	NBM 02	TCLP	Waste	6010B	114388
240-32208-3	NBM 03	TCLP	Waste	6010B	114388
240-32208-3 MS	NBM 03	TCLP	Waste	6010B	114388
240-32208-3 MSD	NBM 03	TCLP	Waste	6010B	114388

TestAmerica Canton

QC Association Summary

Client: Ohio EPA CO
Project/Site: NBM - TANE131206-1OSI

TestAmerica Job ID: 240-32208-1

Metals (Continued)

Analysis Batch: 114760 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-32208-4	NBM 04	TCLP	Waste	6010B	114388
240-32208-5	NBM 05	TCLP	Waste	6010B	114388
240-32208-6	NBM 06	TCLP	Waste	6010B	114388
240-32208-7	NBM 07	TCLP	Waste	6010B	114388
240-32208-7	NBM 07	TCLP	Waste	6010B	114388
LB 240-114293/1-D	Method Blank	TCLP	Waste	6010B	114388
LCS 240-114388/3-A	Lab Control Sample	Total/NA	Waste	6010B	114388
MB 240-114388/2-A	Method Blank	Total/NA	Waste	6010B	114388

Analysis Batch: 114787

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-32208-1	NBM 01	TCLP	Waste	7470A	114389
240-32208-2	NBM 02	TCLP	Waste	7470A	114389
240-32208-3	NBM 03	TCLP	Waste	7470A	114389
240-32208-3 MS	NBM 03	TCLP	Waste	7470A	114389
240-32208-3 MSD	NBM 03	TCLP	Waste	7470A	114389
240-32208-4	NBM 04	TCLP	Waste	7470A	114389
240-32208-5	NBM 05	TCLP	Waste	7470A	114389
240-32208-6	NBM 06	TCLP	Waste	7470A	114389
240-32208-7	NBM 07	TCLP	Waste	7470A	114389
LB 240-114293/1-E	Method Blank	TCLP	Waste	7470A	114389
LCS 240-114389/3-A	Lab Control Sample	Total/NA	Waste	7470A	114389
MB 240-114389/2-A	Method Blank	Total/NA	Waste	7470A	114389

Analysis Batch: 114822

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-32208-1	NBM 01	TCLP	Waste	6010B	114388
240-32208-5	NBM 05	TCLP	Waste	6010B	114388

General Chemistry

Analysis Batch: 112608

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-32154-A-3 DU	Duplicate	Total/NA	Waste	9045C	
240-32208-1	NBM 01	Total/NA	Waste	9045C	
240-32208-2	NBM 02	Total/NA	Waste	9045C	
240-32208-5	NBM 05	Total/NA	Waste	9045C	
240-32208-7	NBM 07	Total/NA	Waste	9045C	
LCS 240-112608/12	Lab Control Sample	Total/NA	Waste	9045C	

Lab Chronicle

Client: Ohio EPA CO
Project/Site: NBM - TANE131206-1OSI

TestAmerica Job ID: 240-32208-1

Client Sample ID: NBM 01

Date Collected: 12/05/13 16:00

Date Received: 12/06/13 14:35

Lab Sample ID: 240-32208-1

Matrix: Waste

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
TCLP	Prep	3010A			114388	12/19/13 09:51	DEE	TAL CAN
TCLP	Analysis	6010B		1	114760	12/21/13 01:28	RKT	TAL CAN
TCLP	Analysis	6010B		10	114760	12/21/13 01:37	RKT	TAL CAN
TCLP	Leach	1311			114293	12/18/13 15:25	DRJ	TAL CAN
TCLP	Prep	7470A			114389	12/19/13 14:00	DEE	TAL CAN
TCLP	Analysis	7470A		1	114787	12/20/13 09:34	AMM2	TAL CAN
TCLP	Leach	1311			114293	12/18/13 15:25	DRJ	TAL CAN
TCLP	Analysis	6010B		20	114822	12/23/13 11:57	RKT	TAL CAN
Total/NA	Analysis	9045C		1	112608	12/06/13 17:16	WAL	TAL CAN

Client Sample ID: NBM 02

Date Collected: 12/05/13 16:02

Date Received: 12/06/13 14:35

Lab Sample ID: 240-32208-2

Matrix: Waste

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
TCLP	Prep	3010A			114388	12/19/13 09:51	DEE	TAL CAN
TCLP	Analysis	6010B		1	114760	12/21/13 01:45	RKT	TAL CAN
TCLP	Leach	1311			114293	12/18/13 15:25	DRJ	TAL CAN
TCLP	Analysis	6010B		10	114760	12/21/13 02:02	RKT	TAL CAN
TCLP	Leach	1311			114293	12/18/13 15:25	DRJ	TAL CAN
TCLP	Prep	7470A			114389	12/19/13 14:00	DEE	TAL CAN
TCLP	Analysis	7470A		1	114787	12/20/13 09:35	AMM2	TAL CAN
Total/NA	Analysis	9045C		1	112608	12/06/13 17:16	WAL	TAL CAN

Client Sample ID: NBM 03

Date Collected: 12/05/13 16:05

Date Received: 12/06/13 14:35

Lab Sample ID: 240-32208-3

Matrix: Waste

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
TCLP	Leach	1311			114293	12/18/13 15:25	DRJ	TAL CAN
TCLP	Prep	3010A			114388	12/19/13 09:51	DEE	TAL CAN
TCLP	Analysis	6010B		1	114760	12/21/13 00:55	RKT	TAL CAN
TCLP	Leach	1311			114293	12/18/13 15:25	DRJ	TAL CAN
TCLP	Prep	7470A			114389	12/19/13 14:00	DEE	TAL CAN
TCLP	Analysis	7470A		1	114787	12/20/13 09:26	AMM2	TAL CAN

Client Sample ID: NBM 04

Date Collected: 12/05/13 16:08

Date Received: 12/06/13 14:35

Lab Sample ID: 240-32208-4

Matrix: Waste

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
TCLP	Leach	1311			114293	12/18/13 15:25	DRJ	TAL CAN
TCLP	Prep	3010A			114388	12/19/13 09:51	DEE	TAL CAN

TestAmerica Canton

Lab Chronicle

Client: Ohio EPA CO
Project/Site: NBM - TANE131206-1OSI

TestAmerica Job ID: 240-32208-1

Client Sample ID: NBM 04

Lab Sample ID: 240-32208-4

Date Collected: 12/05/13 16:08

Matrix: Waste

Date Received: 12/06/13 14:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
TCLP	Analysis	6010B		1	114760	12/21/13 02:11	RKT	TAL CAN
TCLP	Leach	1311			114293	12/18/13 15:25	DRJ	TAL CAN
TCLP	Prep	7470A			114389	12/19/13 14:00	DEE	TAL CAN
TCLP	Analysis	7470A		1	114787	12/20/13 09:41	AMM2	TAL CAN

Client Sample ID: NBM 05

Lab Sample ID: 240-32208-5

Date Collected: 12/05/13 16:15

Matrix: Waste

Date Received: 12/06/13 14:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
TCLP	Prep	3010A			114388	12/19/13 09:51	DEE	TAL CAN
TCLP	Analysis	6010B		10	114760	12/21/13 02:19	RKT	TAL CAN
TCLP	Leach	1311			114293	12/18/13 15:25	DRJ	TAL CAN
TCLP	Prep	7470A			114389	12/19/13 14:00	DEE	TAL CAN
TCLP	Analysis	7470A		1	114787	12/20/13 09:43	AMM2	TAL CAN
TCLP	Leach	1311			114293	12/18/13 15:25	DRJ	TAL CAN
TCLP	Analysis	6010B		50	114822	12/23/13 12:01	RKT	TAL CAN
Total/NA	Analysis	9045C		1	112608	12/06/13 17:16	WAL	TAL CAN

Client Sample ID: NBM 06

Lab Sample ID: 240-32208-6

Date Collected: 12/06/13 12:15

Matrix: Waste

Date Received: 12/06/13 14:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
TCLP	Leach	1311			114293	12/18/13 15:25	DRJ	TAL CAN
TCLP	Prep	3010A			114388	12/19/13 09:51	DEE	TAL CAN
TCLP	Analysis	6010B		1	114760	12/21/13 02:27	RKT	TAL CAN
TCLP	Leach	1311			114293	12/18/13 15:25	DRJ	TAL CAN
TCLP	Prep	7470A			114389	12/19/13 14:00	DEE	TAL CAN
TCLP	Analysis	7470A		1	114787	12/20/13 09:45	AMM2	TAL CAN

Client Sample ID: NBM 07

Lab Sample ID: 240-32208-7

Date Collected: 12/06/13 13:00

Matrix: Waste

Date Received: 12/06/13 14:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
TCLP	Leach	1311			114293	12/18/13 15:25	DRJ	TAL CAN
TCLP	Prep	3010A			114388	12/19/13 09:51	DEE	TAL CAN
TCLP	Analysis	6010B		10	114760	12/21/13 02:35	RKT	TAL CAN
TCLP	Analysis	6010B		100	114760	12/21/13 02:52	RKT	TAL CAN
TCLP	Leach	1311			114293	12/18/13 15:25	DRJ	TAL CAN
TCLP	Prep	7470A			114389	12/19/13 14:00	DEE	TAL CAN
TCLP	Analysis	7470A		1	114787	12/20/13 09:47	AMM2	TAL CAN

TestAmerica Canton

Lab Chronicle

Client: Ohio EPA CO
Project/Site: NBM - TANE131206-1OSI

TestAmerica Job ID: 240-32208-1

Client Sample ID: NBM 07

Lab Sample ID: 240-32208-7

Date Collected: 12/06/13 13:00

Matrix: Waste

Date Received: 12/06/13 14:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9045C		1	112608	12/06/13 17:16	WAL	TAL CAN

Laboratory References:

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

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Certification Summary

Client: Ohio EPA CO
 Project/Site: NBM - TANE131206-1OSI

TestAmerica Job ID: 240-32208-1

Laboratory: TestAmerica Canton

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
California	NELAP	9	01144CA	06-30-14
Connecticut	State Program	1	PH-0590	12-31-13 *
Florida	NELAP	4	E87225	06-30-14
Georgia	State Program	4	N/A	06-30-14
Illinois	NELAP	5	200004	07-31-14 *
Kansas	NELAP	7	E-10336	01-31-14 *
Kentucky (UST)	State Program	4	58	06-30-14
L-A-B	DoD ELAP		L2315	07-18-16
Nevada	State Program	9	OH-000482008A	07-31-14
New Jersey	NELAP	2	OH001	06-30-14
New York	NELAP	2	10975	04-01-14
Ohio VAP	State Program	5	CL0024	10-31-15
Pennsylvania	NELAP	3	68-00340	08-31-14 *
Texas	NELAP	6		08-31-14 *
USDA	Federal		P330-13-00319	11-26-16
Virginia	NELAP	3	460175	09-14-14
Washington	State Program	10	C971	01-12-14 *
West Virginia DEP	State Program	3	210	01-31-14 *
Wisconsin	State Program	5	999518190	08-31-14

* Expired certification is currently pending renewal and is considered valid.



Batch #	Sample ID	Parameters	Matrix	Pre-Test			% Dry Solids				Leach Start						Leach Finish				Tumbler ID	Comments Pretest from 12/16 MS for B, F, MSMSD
				Wt (g) Sample	pH after water	pH after heating	Wt (g) Sample	Filter + Particulates Wt (g)	% Dry Solids	Buffer #	Date On	Buffer ID	Time On	Initials On	Date Off	Time Off	pH Off	Initials Off				
114090	240-32401-c-1	M B F	SOLID	4.91	7	1					1F	12/17/13	1325803	15:30	JW/drf	12/18/13	9:00	5	JW	B	Pretest from 12/16 MS for B, F, MSMSD	
114090	LB 240-114090/1		BLANK	5.02							1F	12/17/13	1325803	15:30	JW/drf	12/18/13	9:00	5	JW	B		
114091	240-32526-f-1	M B P H	SOLID	4.94	7	1					1F	12/17/13	1325803	15:30	JW/drf	12/18/13	9:00	5	JW	B	Pretest from 12/16 MS for Pest	
114091	240-32526-d-2	M B P H	SOLID	5.05	7	1					1	12/17/13	1325479	15:30	JW/drf	12/18/13	9:00	6	JW	A	Pretest from 12/16 MS for Herb	
114091	240-32526-d-3	M B P H	SOLID	5.09	7	1					1	12/17/13	1325479	15:30	JW/drf	12/18/13	9:00	7	JW	A	Pretest from 12/16	
114091	240-32526-f-4	M B P H	SOLID	4.99	7	1					1	12/17/13	1325479	15:30	JW/drf	12/18/13	9:00	7	JW	A	Pretest from 12/16	
114091	240-32199-a-3	M	SOLID	5.00	8	1					1	12/17/13	1325479	15:30	JW/drf	12/18/13	9:00		JW	C	Pretest from 12/16 MSMSD for Metals	
114091	190-2865-a-4	M B	SOLID	4.91	7	1					1	12/17/13	1325479	15:30	JW/drf	12/18/13	9:00	7	JW	A	Pretest from 12/16 MS for BNAs	
114091	190-2865-a-5	M B	SOLID	5.03	7	1					1	12/17/13	1325479	15:30	JW/drf	12/18/13	9:00	7	JW	A	Pretest from 12/16	
114091	240-32473-d-1	M	WATER	N/A	N/A	N/A	105.00	0.09	0.41	0.30%		12/17/13	N/A	N/A	JW/drf	12/18/13	9:00	7	JW	N/A	Percent solid from 12/16 Filter only H2O	
114091	240-32511-a-1	B	SOLID	4.95	6	1					1	12/17/13	1325479	15:30	JW/drf	12/18/13	9:00	5	JW	A	Pretest from 12/16	
114091	240-32514-a-1	M	WATER	4.92	7	1	109.77	0.10	0.39	0.26%		12/17/13	N/A	N/A	JW/drf	12/18/13	9:00	9	JW	N/A	Percent solid from 12/16 Filter only H2O	
114091	240-32538-b-1	M B	SOLID	5.03	7	1					1	12/17/13	1325479	15:30	JW/drf	12/18/13	9:00	7	JW	C	Pretest from 12/16	
114091	240-32580-e-1	M B P H	SOLID	4.92	7	2					1	12/17/13	1325479	15:30	JW/drf	12/18/13	9:00	7	JW	C		
114091	240-32580-e-2	M B P H	SOLID	4.97	7	2					1	12/17/13	1325479	15:30	JW/drf	12/18/13	9:00	7	JW	C		
114091	190-2865-a-2	M B	SOLID	5.05	12	5.72					1	12/17/13	XX	XX	JW/drf	12/18/13	9:00	7	JW	XX		
114091	190-2865-a-3	M B	SOLID	4.97	7	2					1	12/17/13	XX	XX	JW/drf	12/18/13	9:00	7	JW	XX		
114091	240-32571-a-1	M B	SOLID	5.10	3	2					X	50.02	X	1	12/17/13	1325479	15:30	5	JW	C	1000mL buffer	
114091	240-32571-a-2	M B	SOLID	4.95	7	2					1	12/17/13	1325479	15:30	JW/drf	12/18/13	9:00	5	JW	B		
114091	240-32569-a-1	M	SOLID	4.95	7	2					1	12/17/13	1325479	15:30	JW/drf	12/18/13	9:00	5	JW	C		
114091	240-32577-f-1	M B	SOLID	4.93	7	2					1	12/17/13	1325479	15:30	JW/drf	12/18/13	9:00	7	JW	B		
114091	240-32566-a-3	M B	SOLID	4.94	4	2					1	12/17/13	1325479	15:30	JW/drf	12/18/13	9:00	5	JW	B		
114091	LB 240-114091/1		BLANK	5.07							1	12/17/13	1325479	15:30	JW/drf	12/18/13	9:00	5	JW	A		
			BLANK								1	12/17/13	1325479	15:30	JW/drf	12/18/13	9:00	5	JW	C		
			BLANK								1	12/17/13	1325479	15:30	JW/drf	12/18/13	9:00	5	JW	B		
	240-32208-b-7	M	WASTE				100.33	0.10	0.21	0.11%		12/17/13		drf								

TCLP SW/846 Method 1311, SPLPE SW/846 Method 1312 SPLPW SW/846 Method 1312 18-hour DI Leach ASTM Method D3987-85.
 Balance ID: B034
 pH Meter S/N: 1228295055



Sample Number	A Weight of Container + Sample (g)	B Weight of Container + Residue (g)	C Difference (A - B) Sample Weight (g)	D Weight of the Filtrate Bottle (g)	E Weight of the Filtrate bottle + Filtrate (g)	F Difference (E-D) Filtrate Weight (g)	F		G Difference (C-F) Wet Solids Weight (g)	H G x 20 Buffer Amount (mL)	Initials	Comments	Total Water-Soluble Volume in L (TCLP)	Incompatible Volume in L (Waste Dilution)
							Volume of Incompatible Filtrate (mL) (ie. oil)	Volume of Compatible Filtrate (mL) (ie. water filtrate)						
190-2865-a-2	262.75	146.98	115.77	173.45	201.70	28.25	0.0	28.0	X 87.52 X	1750	drj	H2O	1.778	0.0000
			0.00			0.00			0.00	0			0.000	0.0000
240-32208-b-2	382.33	139.35	242.98	57.69	297.53	239.84	0.0	240.0	X 3.14 X	63	drj	H2O	0.303	0.0000
240-32208-a-3	293.51	151.37	142.14	57.75	126.43	68.68	0.0	70.0	X 73.46 X	1469	drj	H2O	1.539	0.0000
240-32208-a-4	312.13	155.30	156.83	56.50	118.58	62.08	0.0	62.0	X 94.75 X	1895	drj	H2O	1.957	0.0000
240-32208-a-6	354.90	146.38	208.52	57.51	180.91	123.40	0.0	123.0	X 85.12 X	1702	drj	H2O	1.825	0.0000
			0.00			0.00			0.00	0			0.000	0.0000
			0.00			0.00			0.00	0			0.000	0.0000
			0.00			0.00			0.00	0			0.000	0.0000
			0.00			0.00			0.00	0			0.000	0.0000
			0.00			0.00			0.00	0			0.000	0.0000
			0.00			0.00			0.00	0			0.000	0.0000
			0.00			0.00			0.00	0			0.000	0.0000

* Filtrate volume only needed when filtrate is incompatible with leachate





Reagent ID: EXTCLPBUFF1_00076

Description:	Extraction Fluid #1 pH 4.88 - 4.98	Expiration Date:	12/18/2013
No. of Bottles:	1	Laboratory:	TestAmerica Canton
Storage Location:	TCLP Room	Prepared By:	Jones, Diane
Reagent Volume:	48.000 L	Solvent:	DIWATER
Creation Date:	12/18/2013	Solvent Lot:	12182013
Container(s):	1326886		
Comment:	pH = 4.94		

Reagent Analyte Information

Analyte	Source ID	Source Exp. Date	Source Conc.	Source Conc. Units	Final Conc.	Final Conc. Units
Sodium Hydroxide	EXTCLP5MNAOH_00006	12/12/2014	200.00000	mol/L	0.31312	%
Acetic acid	EXTCLPACETIC_00009	11/26/2016	1.00000	g/g	0.57000	%

Source Reagents

Reagent	Description	Type	Expiration	Vendor	Vendor Lot #	Vendor Cat Lot #	Volume Used	Volume Units
EXTCLP5MNAOH_00006	5M NaOH		12/12/14				751.49000	g
EXTCLPACETIC_00009	Glacial Acetic Acid for TCLP	Other	11/26/16	Macron	0000024588		273.60000	mL

Date/Time	Date/Time	TCLP Room	Power
	12/18/2013 0:16	21.4	On
	12/18/2013 1:16	21.6	On
	12/18/2013 2:16	21.3	On
	12/18/2013 3:16	21.6	On
	12/18/2013 4:16	21.4	On
	12/18/2013 5:15	21.4	On
	12/18/2013 6:15	21.4	On
	12/18/2013 7:15	21.5	On
	12/18/2013 8:15	21.7	On
	12/18/2013 9:15	21.7	On
	12/18/2013 10:14	21.9	On
	12/18/2013 11:14	21.7	On
	12/18/2013 12:14	21.6	On
	12/18/2013 13:14	21.6	On
	12/18/2013 14:14	21.7	On
	12/18/2013 15:13	21.4	On
	12/18/2013 16:13	21.3	On
	12/18/2013 17:13	21.3	On
	12/18/2013 18:13	21.1	On
	12/18/2013 19:13	21.4	On
	12/18/2013 20:12	21.1	On
	12/18/2013 21:12	21.6	On
	12/18/2013 22:12	21.4	On
	12/18/2013 23:12	21.2	On
	12/19/2013 0:12	21.7	On
	12/19/2013 1:11	21.8	On
	12/19/2013 2:11	21.4	On
	12/19/2013 3:11	21.6	On
	12/19/2013 4:11	21.7	On
	12/19/2013 5:11	21.4	On
	12/19/2013 6:10	21.6	On
	12/19/2013 7:10	21.6	On
	12/19/2013 8:10	21.8	On
	12/19/2013 9:10	21.3	On
	12/19/2013 10:10	21.4	On
	12/19/2013 11:09	21.4	On
	12/19/2013 12:09	21.4	On
	12/19/2013 13:09	21.3	On
	12/19/2013 14:09	21.4	On
	12/19/2013 15:09	21.4	On
	12/19/2013 16:08	21.4	On
	12/19/2013 17:08	21.4	On
	12/19/2013 18:08	21.5	On
	12/19/2013 19:08	21.4	On
	12/19/2013 20:07	21.2	On
	12/19/2013 21:07	21.2	On
	12/19/2013 22:07	21.2	On
	12/19/2013 23:07	21.2	On



TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

**CHAIN OF CUSTODY
AND
RECEIVING DOCUMENTS**



240-32208 Chain of Custody



TestAmerica Canton Sample Receipt Form/Narrative
Canton Facility

Login #: 32208

Client EPA Site Name _____

Cooler unpacked by: _____

Cooler Received on 12-6-13 Opened on 12-6-13

FedEx: 1st Grd Exp UPS FAS Stetson Client Drop Off TestAmerica Courier Other _____

TestAmerica Cooler # _____ Foam Box Client Cooler Box Other _____

Packing material used: Bubble Wrap Foam Plastic Bag None Other _____

COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt

IR GUN# A (CF +0 °C) Observed Cooler Temp. <u>1.4</u> °C	Corrected Cooler Temp. <u>1.4</u> °C	<input type="checkbox"/> See Multiple Cooler Form
IR GUN# 4 (CF -1 °C) Observed Cooler Temp. _____ °C	Corrected Cooler Temp. _____ °C	
IR GUN# 5 (CF +1 °C) Observed Cooler Temp. _____ °C	Corrected Cooler Temp. _____ °C	
IR GUN# 8 (CF +1 °C) Observed Cooler Temp. _____ °C	Corrected Cooler Temp. _____ °C	
2. Were custody seals on the outside of the cooler(s)? If Yes Quantity 1 Yes No
 - Were custody seals on the outside of the cooler(s) signed & dated? Yes No NA
 - Were custody seals on the bottle(s)? Yes No
3. Shippers' packing slip attached to the cooler(s)? Yes No
4. Did custody papers accompany the sample(s)? Yes No
5. Were the custody papers relinquished & signed in the appropriate place? Yes No
6. Did all bottles arrive in good condition (Unbroken)? Yes No
7. Could all bottle labels be reconciled with the COC? Yes No
8. Were correct bottle(s) used for the test(s) indicated? Yes No
9. Sufficient quantity received to perform indicated analyses? Yes No
10. Were sample(s) at the correct pH upon receipt? Yes No NA pH Strip Lot# HC391902
11. Were VOAs on the COC? Yes No
12. Were air bubbles >6 mm in any VOA vials? Yes No NA
13. Was a trip blank present in the cooler(s)? Yes No

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other
Concerning _____

14. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

Samples processed by: Ch. [Signature]

15. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.
 Sample(s) _____ were received in a broken container.
 Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

16. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.
 Time preserved: _____ Preservative(s) added/Lot number(s): _____

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-32208-1

SDG No.: _____

Instrument ID: NOEQUIP Method: 9045C

Start Date: 12/06/2013 11:05 End Date: 12/06/2013 17:16

Prep Types

T = Total/NA



GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-32208-1

SDG No.: _____

Batch Number: 112608 Batch Start Date: 12/06/13 11:04 Batch Analyst: Lecorchick, Willis A

Batch Method: 9045C Batch End Date: 12/06/13 17:00

Lab Sample ID	Client Sample ID	Method Chain	Basis	FinalAmount	pHread1	TempRead1	pHRead2	TempRead2	CalcMsg
CCV 240-112608/11		9045C		10 mL	7.00 SU				pH = Read 1
LCS 240-112608/12		9045C		10 mL	6.47 SU				pH = Read 1
240-32154-A-3 DU		9045C	T	10 mL	8.62 SU	18.2 Celsius	8.64 SU	18.2 Celsius	Read 2 Pass
CCV 240-112608/16		9045C		10 mL	7.00 SU				pH = Read 1
CCV 240-112608/20		9045C		10 mL	6.99 SU				pH = Read 1
240-32208-A-1	NBM 01	9045C	T	10 mL	1.94 SU	15.3 Celsius			pH = Read 1
240-32208-A-2	NBM 02	9045C	T	10 mL	1.64 SU	15.0 Celsius			pH = Read 1
240-32208-A-7	NBM 07	9045C	T	10 mL	1.22 SU	13.5 Celsius			pH = Read 1
240-32208-A-5	NBM 05	9045C	T	10 mL	0 SU	15.3 Celsius			pH = Read 1
CCV 240-112608/25		9045C		10 mL	6.99 SU				pH = Read 1

Lab Sample ID	Client Sample ID	Method Chain	Basis	WCPH7 00045	WCPHLC5 00008				
CCV 240-112608/11		9045C		10 mL					
LCS 240-112608/12		9045C			10 mL				
240-32154-A-3 DU		9045C	T						
CCV 240-112608/16		9045C		10 mL					
CCV 240-112608/20		9045C		10 mL					
240-32208-A-1	NBM 01	9045C	T						
240-32208-A-2	NBM 02	9045C	T						
240-32208-A-7	NBM 07	9045C	T						
240-32208-A-5	NBM 05	9045C	T						
CCV 240-112608/25		9045C		10 mL					

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-32208-1

SDG No.: _____

Batch Number: 112608 Batch Start Date: 12/06/13 11:04 Batch Analyst: Lecorchick, Willis A

Batch Method: 9045C Batch End Date: 12/06/13 17:00

Batch Notes	
pH Buffer 1 ID	580423
pH Buffer 2 ID	945008
pH Buffer 3 ID	1208510
pH Buffer 4 ID	1015110
pH Buffer 5 ID	922364
Calibration Date and Time	12/6/13 1105
Electronic Slope	99.8
Instrument ID	Randolph
Probe ID	wcp99

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

9045C



Internal Chain of Custody Tracking

Login	Smp	Customer Sample ID	Matrix	Container ID	Lab Sample ID	Container Type	Location	Custody User	I/O	ICOC ID	ICOC Date
240-32208	1	NBM 01	Waste	240-1310019	240-32208-A-1	Soil jar 8oz		Jones, Diane	I	240-23422	12/19/13 16:41
240-32208	1	NBM 01	Waste	240-1310019	240-32208-A-1	Soil jar 8oz	TCLP Land	Jones, Diane	I	240-23299	12/16/13 10:49
240-32208	2	NBM 02	Waste	240-1310020	240-32208-A-2	Soil jar 8oz	CAGE 13				
240-32208	2	NBM 02	Waste	240-1310021	240-32208-B-2	Soil jar 16oz	CAGE 13	Jones, Diane	I	240-23423	12/19/13 16:41
240-32208	2	NBM 02	Waste	240-1310021	240-32208-B-2	Soil jar 16oz	TCLP Land	Jones, Diane	I	240-23299	12/16/13 10:49
240-32208	3	NBM 03	Waste	240-1310022	240-32208-A-3	Soil jar 16oz	CAGE 13	Jones, Diane	I	240-23423	12/19/13 16:41
240-32208	3	NBM 03	Waste	240-1310022	240-32208-A-3	Soil jar 16oz	TCLP Land	Jones, Diane	I	240-23299	12/16/13 10:49
240-32208	4	NBM 04	Waste	240-1310023	240-32208-A-4	Soil jar 16oz	CAGE 13	Jones, Diane	I	240-23423	12/19/13 16:41
240-32208	4	NBM 04	Waste	240-1310023	240-32208-A-4	Soil jar 16oz	TCLP Land	Jones, Diane	I	240-23299	12/16/13 10:49
240-32208	5	NBM 05	Waste	240-1310024	240-32208-A-5	Soil jar 16oz	CAGE 13	Jones, Diane	I	240-23423	12/19/13 16:41
240-32208	5	NBM 05	Waste	240-1310024	240-32208-A-5	Soil jar 16oz	TCLP Land	Jones, Diane	I	240-23299	12/16/13 10:49
240-32208	6	NBM 06	Waste	240-1310025	240-32208-A-6	Soil jar 16oz	CAGE 13	Jones, Diane	I	240-23423	12/19/13 16:41
240-32208	6	NBM 06	Waste	240-1310025	240-32208-A-6	Soil jar 16oz	TCLP Land	Jones, Diane	I	240-23299	12/16/13 10:49
240-32208	7	NBM 07	Waste	240-1310026	240-32208-A-7	Soil jar 16oz	CAGE 13				
240-32208	7	NBM 07	Waste	240-1310027	240-32208-B-7	Soil jar 16oz	CAGE 13	Jones, Diane	I	240-23423	12/19/13 16:41
240-32208	7	NBM 07	Waste	240-1310027	240-32208-B-7	Soil jar 16oz	TCLP Land	Jones, Diane	I	240-23299	12/16/13 10:49